



Atty. Docket: 58763.000013 #12

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:)

Daniel DUPRET et al.)

Serial No.: 09/840,861)

Filed: April 25, 2001)

Group Art Unit: 1637

Examiner: Hashemi

RECEIVED

FEB 14 2003

TECH CENTER 1600/2900

For: PROCESS FOR IN VITRO CREATION OF RECOMBINANT
POLYNUCLEOTIDE SEQUENCES BY ORIENTED LIGATION

COMMUNICATION REGARDING IDS FILED JULY 30, 2002

Director of the United States
Patent and Trademark Office
Washington, D.C. 20231

RECEIVED

FEB 21 2003

OFFICE OF PETITIONS

Sir:

On February 12, 2003, in a telephone conversation between the Examiner and Applicants' under-signed counsel, the Examiner requested that Applicants re-submit copies of the articles originally submitted with the IDS filed on July 30, 2002, since the copies were apparently misplaced by the Patent Office. Copies of the articles are enclosed, and their citations are listed below.

WEISBERG, Edward P., "Simultaneous Mutagenesis of Multiple Sites: Application of the Ligase Chain Reaction Using PCR Products Instead of Oligonucleotides, Biotechniques, Vol. 15, No. 1, July 1993, pp.172-178

STEMMER, W. P. C., "DNA shuffling by random fragmentation and reassembly: In vitro recombination for molecular evolution", Proc. Natl. Acad. Sci. USA, Vol. 91, pp. 10747-10751, October 1994

PUNNONEN, J. et al., "Molecular breeding by DNA shuffling", Science & Medicine, pp. 38-47, March/April 2000

COCO, W. M. et al., "DNA shuffling method for generating highly recombined genes evolved enzymes", Nature Biotechnology, Vol. 15, April 2001, pp. 354-358

PELLETIER, J., "A rachitt for our toolbox", Nature Biotechnology, Vol. 19, No. 4, April 2001, pp. 314-315

CRAMERI, A. et al., "DNA shuffling of a family of genes from diverse species accelerates directed evolution", Nature, Vol. 391, January 1998, pp. 288-291

NESS, J. E. et al., "DNA shuffling of subgenomic sequences of subtilisin", Nature

Biotechnology, Vol. 17, September 1999, pp. 893-896

CHANG, C. J. et al., "Evolution of a cytokine using DNA family shuffling",
Nature Biotechnology, Vol. 17, August 1999, pp. 793-797

MINSHULL, J. et al., "Protein evolution by molecular breeding", Current
Opinion in Chemical Biology, 1999, Vol. 3, pp. 284-290

HARAYAMA, S. "Artificial evolution by DNA shuffling", Tibtech, February
1998, Vol. 16, pp. 76-82

KURTZMAN, A., "Advances in directed protein evolution by recursive genetic
recombination: applications to therapeutic proteins", Current Opinion in
Biotechnology, 2001, Vol. 12, pp. 361-370

ZHAO, H. et al., "Optimizing of DNA Shuffling for High Fidelity
Recombination", Nucleic Acids Research, Vol. 25, No. 6, pp. 1307-1308, (1997)

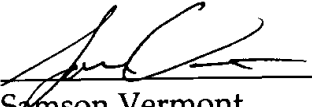
LYAMICHEV, V. et al., "Polymorphism Identification and Quantitative
Detection of Genomic DNA by Invasive Cleavage of Oligonucleotide Probes", Nature
Biotechnology, Vol. 17, pp. 292-296 (1999)

Because copies of the articles were previously submitted with the IDS,
Applicants believe that no fees are required for this Communication. However, if any
fees are required, please charge the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,

HUNTON & WILLIAMS

Date: Feb. 12, 2003


Samson Vermont
Registration No. 42,202

1900 K Street, N.W., Suite 1200
Washington, D.C. 20006-1109
Ph. (202) 955-1500
Fax (202) 778-2201